



**Substitution Specification Page 4**

#### **IV. BRIEF DESCRIPTION OF THE DRAWINGS**

Figure 1 is an illustration of a conductive coating and metal layer applied dielectric material with a desirable tooth structure:

5 Figure 2 is an illustration of a prior art conductive coating and metal layer on the applied  
dielectric material with the surface produced by roughening processes;

Figure 3 is an illustration of a double sided printed circuit board without plated through holes;

Figure 4 is an illustration of a multilayer printed circuit board with plated through holes, filled or unfilled with conductive or nonconductive material;

Figure 5 is an illustration of a multilayer printed circuit board without plated through holes;

Figure 6 is an illustration of a multilayer printed circuit board having more than two layers with plated through holes filled or unfilled with conductive or nonconductive material;

Figure 7 is an illustration of any of the foregoing printed circuit boards after applying a dielectric material thereon;

Figure 8 is an illustration of the multilayer printed circuit board of Figure 7 after forming micro vias:

Figure 9 is an illustration of the multilayer printed circuit board of Figure 7 after opening the through holes and after etching the applied dielectric material to produce the teeth illustrated in Figure 1:

20 Figure 10 is an illustration of the multilayer printed circuit board of Figure 9 after application  
of a conductive coating to fill in around the teeth and connect micro via holes and the through-holes  
and

Figure 11 is an illustration of the multilayer printed circuit board of Figure 10 after plating the conductive coating to form a metal layer and complete forming circuitry.

**25 V. DETAILED DESCRIPTION OF THE DRAWINGS**

Figure 1 is an illustration of a conductive coating and metal layer on the applied dielectric material with a desirable tooth structure. In contrast, Figure 2 is an illustration of a prior art conductive coating and metal layer on the applied dielectric material with the surface produced by roughening processes. In both Figures 1 and 2, show a dielectric material and a combination of a thin conductive coating and metal later. Compare